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# **The music industry and the iPod generation: Living Labs to the rescue?**

## **Abstract**

Despite that research indicates that user input increases the chances of innovation success, a lot of this potential remains untapped. The Living Lab-approach provides a valuable alternative to the current approaches, allowing for a tailored integration of user feedback into the NPD-process. The goal of this paper is to demonstrate the added value of this approach. This will be illustrated based on three cases studies related to the music industry. These findings are discussed together with the best practices for this type of research.

Keywords: Living lab, Open innovation, Multidisciplinary research

## **Introduction**

Users have been involved in the design process for several decades. During recent years it has become increasingly easy to collect user feedback. Prototyping hardware and software is getting cheaper and faster. New tools (like 3D printing and web development) allow to shorten the feedback loop. Next to prototypes, users can also provide feedback on more mature products, leading to commercial and design insights. User feedback can thus be used during the different phases of the new product development process (Schuurman, De Moor, De Marez, & Evens, 2010). Despite this increasing interest in user-centered design it remains difficult to implement this research approach in the new product development process. Previous research indicated that most research methods could lead to a wrong assessment of the market potential of an innovation (Bennett & Kottasz, 2001). Furthermore the classic approaches (eg. survey, interviews) do not test the innovation in a real life setting. These one shot research approaches clearly have limitations. Tidd (2001) states that the best practices for

innovation management depend on environmental, organizational and innovation specific factors. The same should be true for the selected research methods.

The Living Labs approach tries to overcome these issues by providing the necessary flexibility to adjust the research approach to the research setting. This results in a more realistic overview of the situation and provides more in-depth information. In this paper it is argued that Living Labs is an excellent research methodology to research innovation in a real life setting.

Three case studies about music related innovations are documented and the best practices are discussed. These insights can assist the music industry to make decisions in the coming years. It is clear that this approach has limitations as well (for example the time-consuming task of finding and selecting the right participants).

## **Theoretical framework: open innovation**

In the past, companies were mainly inner focused, leading to big secretive innovation projects. From the early 1990s on it became clear that the R&D process could be improved by creating partnerships between different companies. This resulted in a new paradigm within innovation management literature called ‘open innovation’. Chesbrough, Vanhaverbeke & West (2008) defined this as a non-linear, (or even cyclical) innovation process with more cooperation between internal R&D and the outside world, and with companies benefiting from the synergies associated with this collaboration. These authors see this ‘open innovation’-paradigm as “the antithesis of the traditional vertical integration model (Chesbrough et al., 2008). This would allow R&D departments to become smaller and more cost efficient and shortens the feedback loop (Christensen, Olesen, & Kjær, 2005). Especially for disruptive innovations, a lot of resources are required and it might take several steps before an innovation is launched (Golder, Shacham, & Mitra, 2009). Next to resources, open innovation can also facilitate the sharing of knowledge and risks. Most companies do not have all the required knowledge in house to develop new innovations and work together with partners to develop products or services. Levén & Holmström (2008) identified three additional factors that have facilitated the decline of the closed innovation model in favor of open innovation 1) knowledge flows between (competing) companies caused by changing job positions of employees, taking their knowledge with them, 2) the increasing number of possibilities for developing ideas and technologies outside firms (e.g. through spin-offs) and 3) other actors in the value chain, such as customers and users, playing increasingly important roles in contemporary innovation processes. Open innovation thus requires a different focus and allocation of resources (Chesbrough, 2004).

In sum, open innovation creates new opportunities for researchers and companies that want to validate concepts and ideas. A lot of research has shifted away from a strict technological deterministic view, where the adoption of a product or service is an afterthought to a more interactionist point of view where the relation between the technology and the user is stressed (Boczkowski, 2004). As discussed in the next section, Living Labs are an example of open innovation where different stakeholders can provide input. This can be a great tool for the music industry to monitor how people use its music.

## Theoretical framework: Living Labs

Traditional research methods (e.g. surveys, focus groups, interviews) focus only on one moment where the input of the user is requested. This feedback is generated fast but the results are very general. A second approach is to log every action of a user. Log files do not require a lot of effort of the users but are very invasive and not every user wants to participate in this type of research. Furthermore, these results can not indicate how people actually experience the action, since only the actions are recorded. A third approach is to use longitudinal research. In practice, this results in using a traditional research method over a longer period of time. This can give insights in aspects like seasonal effects, but it is still limited, since only qualitative or quantitative data is available. Living Labs try to overcome this limitation by using different research methods in a real life setting (Kusiak, 2007). This provides a more in-depth insight in the wants and needs of a user and provides a broader contextualization of the user research. The main drawback of the Living Lab approach is that it requires a lot of effort of the participants (see Figure 1).

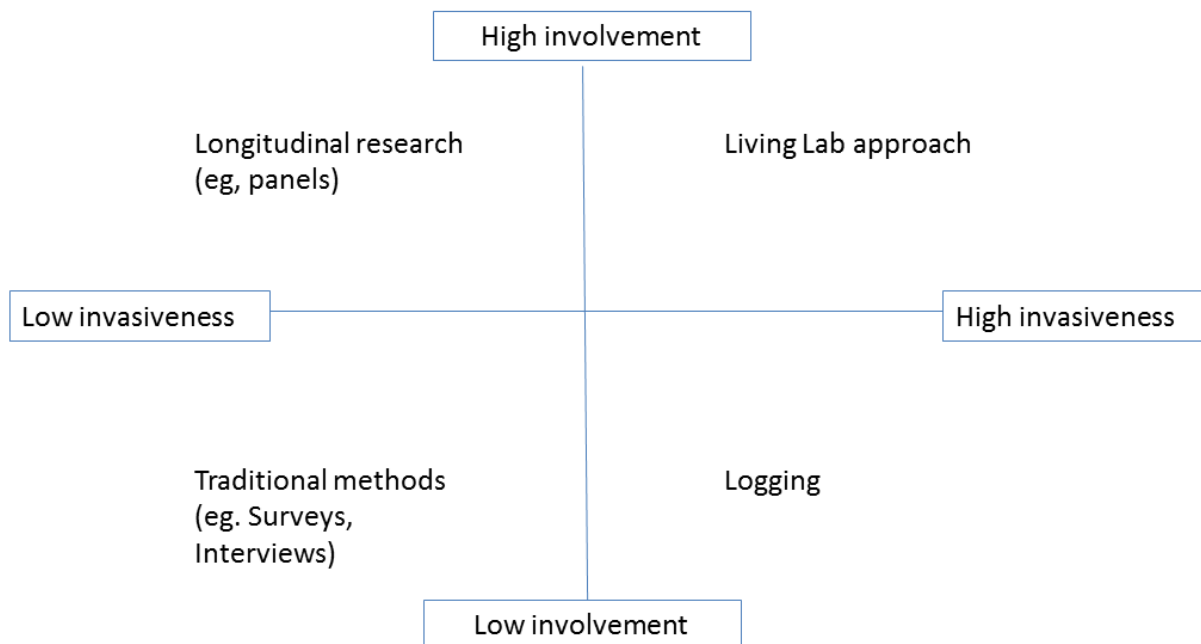


Figure 1: Overview of the different research approaches.

At the moment, there is no clear definition of Living Labs since different competing approaches exist (Almirall, 2008). The concept can cover a wide range of research and methods and both quantitative and qualitative methods can be combined in one research project. Living Labs can be (semi)permanent, but it can also be a more ad hoc constellation. Both incremental and disruptive innovations can be examined, there can be a wide range of actors involved and the goals of the research can be very different. Within a Living Lab, it is possible to examine multiple iterations of a product throughout the different stages of the innovation process (Schaffers et al., 2007). This connects Living Labs to the ‘open innovation’ perspective, where innovation is seen as a non-linear and open process with cooperation and collaboration between different stakeholders (Chesbrough, 2003). For a deeper discussion of the roots and history of the Living Lab-concept, see Schuurman et al. (2010).

In order to enrich theory-building regarding the European vision on Living Labs, Følstad (2008) adopted a bottom-up approach and conducted a wide literature review of ICT Living Labs, identifying nine distinct characteristics. We can construct the following definition: within Living Labs, new ICT-solutions are evaluated by users (1) by experiencing and experimenting in a real-world context (2) and within a familiar usage context (3) for medium- or long-term (4) and on a large scale (5). This allows for research into the usage context (6) with the possible discovery of unexpected ICT-uses and new service opportunities (7), and the technical testing of the innovation in a realistic context (8). During the innovation process, co-creation with the users (9) takes place. While certain authors focus on technical testbeds, Living Labs can be seen as an environment where users can test innovations and provide feedback (Tingan, Zhenyu, Kimmo, Matti & Yang, 2012). The main goal of a Living Lab in

that opinion is to test innovations based on different research methods in a real life setting so that the feedback of the users can be incorporated (Lepik, Krigul & Terk, 2010). This can create a constant feedback loop so that it is possible to refine the innovation. Almirall & Wareham (2009) summarize the three main ideas by which Living Labs are driven: a) involving users as co-creators on equal grounds with the rest of the stakeholders and b) experimentation in real world settings. Based on this we can define Living Labs as a research approach where users are considered as co-partners in the process of innovation and where they can materialize their own needs, aspirations and wishes in their real-life context through active involvement. This is sometimes referred to as the Living Lab-philosophy: to turn users from being traditionally considered as a problem into value creators.

The approach of Pierson & Lievens (2005) illustrates how Living Labs work in practice. They identified 5 stages in a Living Lab research project:

- 1) contextualization: an exploration of the technological and social implications of the technology or service under investigation. This means a technological scan and state-of-the-art study.
- 2) selection: identifying potential users or user groups. This can be done on a socio-demographic level, based on selective or criterion sampling or the allowance for theoretical variation of previously defined concepts.
- 3) concretization: an initial measurement of the selected users on current characteristics, behavior and perceptions regarding the research focus, in order to enable a post-measurement.
- 4) implementation: the operationally running field test phase of the Living Lab. The research methods in this stage are direct analysis of usage by means of remote data collection techniques (e.g. logging), indirect analysis based on e.g. focus groups, interviews, self-reporting techniques, ...



5) feedback: an ex-post-measurement of the users (using the same techniques as the initial measurement) and the formulation of a set of technological recommendations based on the analysis of data gathered during the implementation-phase.

This model shows that the actual ‘testing-phase’ is only one element within a Living Lab-research approach, contrary to e.g. test marketing. The pre- and post-measurements of the users stress the ability of Living Lab-research to uncover the ‘added value’ of the innovation and show that the Living Lab-concept is still in line with classical laboratory research, which also works in similar phases.

This will be illustrated in the next sections based on the music industry. Since the natural habitat of Living Labs are markets with a very high level of uncertainty, it seems appropriate to investigate the way Living Labs can help to shape the future music industry. As is being discussed in the next section, the music. This is an interesting environment to implement Living Lab research to gain deeper insights in the end-users and by doing so, increasing the chances of success. By deeply involving and monitoring the end users it can be examined how and where people listen to music and at the meanwhile capturing their opinions, see how they actually use new products or services, etc.

## **The music business: a space of innovation?**

For decades, the music industry faced a relatively prosper future, with technological progress renewing sources of income and securing the long-term viability of the industry. Taking over power from the music publishers at the end of the nineteenth century, new recording techniques created a market that was mainly used to promote the sale of gramophones (Garofalo, 1999). Since the 1960s, however, the recording industry has grown exponentially on the back of technological innovations like the LP, and later audio cassettes and compact discs, whereas manufacturing, recording and promoting music became the industry's core product. The entry of these formats created extensive substitution effects and allowed the industry to generate exorbitant profits from consumers updating their 'old' music collection to new technologies. Although compact discs were first perceived as a threat by the industry, the technology opened an extremely profitable era for the industry. In addition, the rise of radio broadcasting, which was originally feared to cause a decline in music sales, created a new revenue stream in the form of license payments and laid the foundations of the music business as a copyrights-based industry (Wikström, 2009). Since technological innovations were hardly disruptive for the industry and even supported its traditional way of doing business, the music value chain remained relatively stable and the business model, based on the lucrative sale of music records, remained in place until the dawn of the twentieth century.

The following technological innovation, however, proved more problematic for the industry's survival. Digital file-sharing and the rise of the Internet as a worldwide distribution network, combined with MP3 as a file format, emerged as a disruptive technology and soon global music sales started to plummet. According to the British Recorded Music Industry, combined sales of digital and physical albums fell from 163.4 million to 113.2 million between 2004 and 2011 (Jones, 2012). Albeit the result of the interplay between industry strategy, consumer behavior and the wider social, political and cultural context of music listening, Internet

technology fundamentally affected the market structure and value chain of the recording industry. The industry sharply stepped up its response to the growth of Internet piracy and began, under the label of ‘damage control’, suppressing the radical potential of file-sharing and MP3 technology (Preston & Rogers, 2011). The application of technological safeguards (encryption or digital rights management) or litigation of unauthorized file-swapping services and its users proved hardly effective. Instead of embracing the new technology and establishing innovative online services, the industry got stuck in its ‘old’ business model and seemed incapable to adapt itself to the changing strategic environment. As a result, new entrants from outside the music industry like Apple’s iTunes and Amazon claimed their spot and became the dominant gatekeepers in the digital music landscape.

Today, the music industry has evolved from a traditional manufacturing industry to a service-based business, in which digital music has become available at any time via ubiquitous music service providers (Vogel, 2011). Record companies have largely left the traditional business model of distributing, marketing and selling music, and replaced it by a business model that aims to license music. Increasingly, digital music services are seen as a revenue generator and considered a powerful alternative to illegal file-sharing networks. According to IFPI’s Digital Music Report (2012), digital music already represents 52% of total industry revenues in the United States. In recent years, as Wikström (2012) argues, ownership-based models have been complemented by access-based models. Whereas music files were initially bought and owned – either physically on discs, or digitally via retail stores such as iTunes – a new kind of music listening behavior emerges that complements the traditional ownership model and that provides unlimited access to the back catalogue of all licensed record companies. However, the long-term viability of online services including Spotify, Deezer or Pandora, which struggle in finding the optimal mix of subscriptions and advertising, has been questioned multiple times. Therefore, Wikström suggests that ‘context-based’ services have greater

potential to create economic value than those services that merely provide access. Context-based services allow consumers to share music experiences with their friends and organize their music experiences, using social media technology in more convenient ways. Hence, such services provides a far more expansive space for innovation than access-based services. Successful monetization of digital music will come through business models that harness real-time information about consumers' listening behavior. The future of the music business therefore does not rely upon enforcing copyright law, but on experimenting with innovative business models (Priest, 2008). Indeed, the music fans have used several applications during recent years, but most of them disappeared quite rapidly.

Next to merely providing user feedback, testing an innovation in a real life setting can also be used to examine these new business models. Whereas the music industry has to rely on 3rd party applications at the moment, new business models would allow them to take control over the distribution. Television services like Hulu have shown that partnering with other content providers can create very valuable services that can compete with existing services and improve the quality of experience of the end users. In the next sections, three studies are being discussed, which could improve the user experience of listening to music, based on a Living Lab approach.

## Methodology

All three case studies being discussed in this paper were research projects within the Mediatuin (“Media garden”) Living Lab<sup>1</sup>. This is a panel based living lab with a thematic focus on cross media innovations. This panel based approach makes this Living Lab stand out to most other Living Labs. This thematic approach gives lead users an opportunity to be involved and increases the commitment of the participants. The recruitment of the panel members consisted of a large intake survey which looks at the respondent’s usage and adoption of (new) media technologies. The panel consists out of 7.216 people. It is important to note that the panel is not representative for the whole population since there is an overrepresentation of young people. Given the Living Lab-panel has a clear thematic focus by which its members are recruited and surveyed this is not an issue. One of the main benefits of such a panel based approach is the ability to make pre-analyses, make segmentations of relevant user profiles and it helps to analyze further research results into a broader context.

The data of this intake survey indicates that the gap between the percentage of respondents that actually own music and respondents that stream music online is getting smaller: 62.8% of the respondents indicate to still buy CD-albums. The amount of respondents indicating they download songs illegally is 58.8% which is rather high. More than half (51.5%) listens to online playlists such as Mixcloud, Soundcloud and Last.fm. Four out of ten (40.2%) respondents download albums illegally. Buying songs or albums legally is the least common activity among the respondents: 26.6% buys songs online, while 21.6% buys albums online.

When we look at these activities on a more regular basis (several times a month or more) we see a shift from owning music to downloading music illegally and streaming music online: 13.6% buys a CD-album at least several times a month, while 19.5% downloads albums illegally and 6.4% buys albums online legally. At the level of individual songs this shift is

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<sup>1</sup> <http://mediatuin.be/>

stronger: 3% buys CD-singles at least several times a month, while 64.1% downloads songs illegally and 10.9% buys songs online legally. Illegally downloading songs is thus the most common activity for collecting music on a monthly basis. The second most common activity for collecting music is streaming music: 29.2% listens to online playlists at least several times a month.

Ways of experiencing music have however expanded to being more than just listening to or owning music. Our survey results show that the visual aspect of music has started to play an important role: with 89.6% respondents, watching a music video online is the most common way to experience music; 68.6% also watches music videos on television. The ‘Live’ experience also is an important aspect of experiencing music: 76.9% goes to and thus pays for concerts; 65.8% goes to music festivals and 51.5% goes to DJ-sets. The owning of ‘physical things’ is, however, still important: 26% buys merchandise from bands or DJ’s, such as t-shirts, posters, etc.

The mobile aspect of music has also started to play an important role in music experience: 39.2% listens to mp3-songs with a mobile phone and 10.9% streams music on a mobile phone. Almost half (49.6%) of the tablet owners (N=491) listens to mp3-songs on their tablet and 26.1% streams music on their tablet. Of all mobile phone and tablet owners (N=7216), 8.1% indicates that they download and use mobile applications of band/DJ’s.

Finally, making and sharing music is rising: 21.5% of the respondents indicate that they mix music and upload this music afterwards to share it with others. It is clear that the way people consume music has changed during recent years. For the music industry it is important to follow up on how this evolves. Testing new concepts in a real life setting can be very valuable in that perspective.

In this paper, three innovations that were examined based on this Living Lab methodology are discussed. The first innovation is a new way of listening to music in bars (Jukebox), the

second an online radio recording service (Streemr) and the third a crowdfunding platform for music (Sonic Angel). The first innovation focuses on providing the user more control over the played music in a public setting. Another option for the music industry is to mix music with additional content. To examine the potential of this approach, a music and radio recording service was proposed. The third service is a crowdfunding platform for promising artists. In all three researches, a multi-method approach was applied with both quantitative and qualitative research methods. The purpose of the researches was multifold: probing for user interest and behavior, their willingness to pay, gather feedback but also technical aspects were tested. The goal was to determine what new services the music industry could develop to remain relevant in the digital age.

The 5 phases of Pierson & Lievens (2005) that were discussed before will be used to analyze the data.

## Results

The phases will be elaborated by discussing the different cases.

### Step 1: contextualization phase: Sonic Angel case

The first step in a Living Lab research is to get a clear view on the environment in which the innovation will be developed. This involves monitoring trends and relevant academic research, investigating the available technologies, gathering relevant expert opinions and a more general user study. For the research on the crowdfunding platform for musicians, Sonic Angel, this meant conducting in-depth interviews with several major stakeholders in the music industry: artists, booking agents, record companies, distributors, radio stations, concert promoters and other relevant stakeholders such as the Belgian society of authors, publishers, composers and publishers, SABAM. These interviews resulted in a solid insight in the current opinions and believes within the music industry itself.

- |   |
|---|
| <ul style="list-style-type: none"><li>- <i>Physical music carriers will continue to exist.</i></li><li>- <i>Streaming can be a strong weapon against illegal downloads.</i></li><li>- <i>Fanfunding has potential, but needs to become more mainstream to succeed.</i></li><li>- <i>No concerns on business models based on consumer data.</i></li><li>- <i>Social media became an essential part of the branding and the engagement with fans.</i></li><li>- <i>Live performances are becoming ever more important.</i></li><li>- <i>Almost everyone is experimenting with experimental models: pay with a tweet, crowdfunding, digital deals, ...</i></li><li>- <i>DIY is very important. Artists like to do things themselves, as much as possible.</i></li><li>- <i>Concerns about the integrity of the artist when the fan gain more influence.</i></li><li>- <i>Mixed opinions on illegal downloads. Not everyone considers them as a threat.</i></li></ul> |
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Table 1: A short selection of the most prominent stakeholder opinions.

Besides this analysis of the current market situation, a deeper segmentation of the existing living lab panel was made using k-means clustering. This resulted in 5 mayor music consumer profiles: people which didn't care about music at all, people who were only little interested in music and 3 types of highly involved music lovers. The first of these profiles downloads all his music illegally, the second buys all his music on CD's and the third profile pays to stream his music. These profiles lead to the making of persona's which were then validated using qualitative research methods through 3 focus groups and 10 in-depth interviews.



This broader environmental study allowed to match the crowdfunding idea of Sonic Angel with the existing habits and beliefs around music and it was a starting point for the development of a concept which allows live donations through a mobile application to fund the artists' project. This concept was mainly based on the observation that 1) the involvement with the band is the highest on these live moments 2) there is a higher willingness to pay for all profiles when attending a concert 3) there is a strong believe of the industry in crowdfunding models to help young artists. As a final step in this iteration, this concept was then visualized with a demo movie and presented to both the professional stakeholders and the end-users to validate the concept before going to the next phase.

**Step 2; Selection phase: Jukebox case**

Based on the available data, an initial analysis indicated that certain people could be more interested in the innovations than others. Agglomerative hierarchical clustering was used to determine the amount of clusters, then K means was used to classify the respondents. Different profiles were created based on the available dataset. Based on these profiles, certain users were selected to participate in the subsequent steps. For the Jukebox case 4 clusters were identified. These clusters were constructed based on two main variables: interest in music and frequency of going out (see Figure 2). Based on post hoc tests, it was possible to determine that these clusters differed on a lot of variables (socio-demographics, usage, ownership) so that the clustering is meaningful. One cluster (with people that don't like music and don't often go out) was not taken into account for further analysis. The respondents in the other clusters were invited to participate in a follow up survey that discussed the specific innovation.

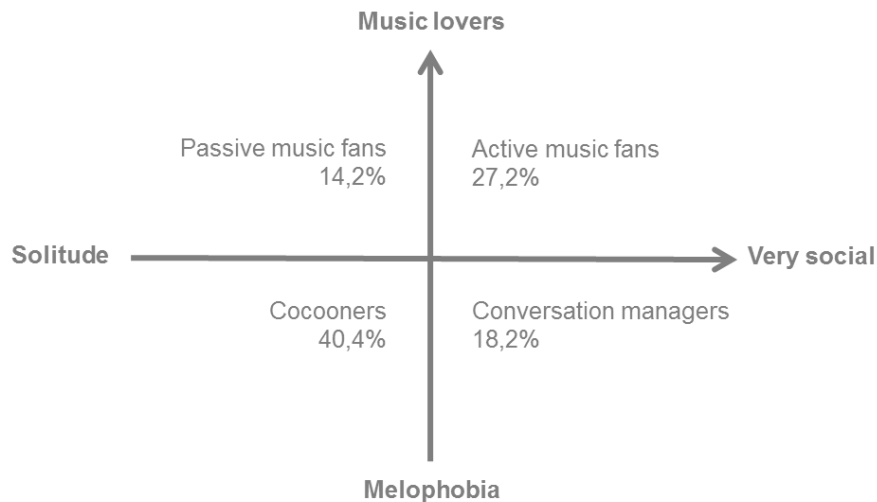


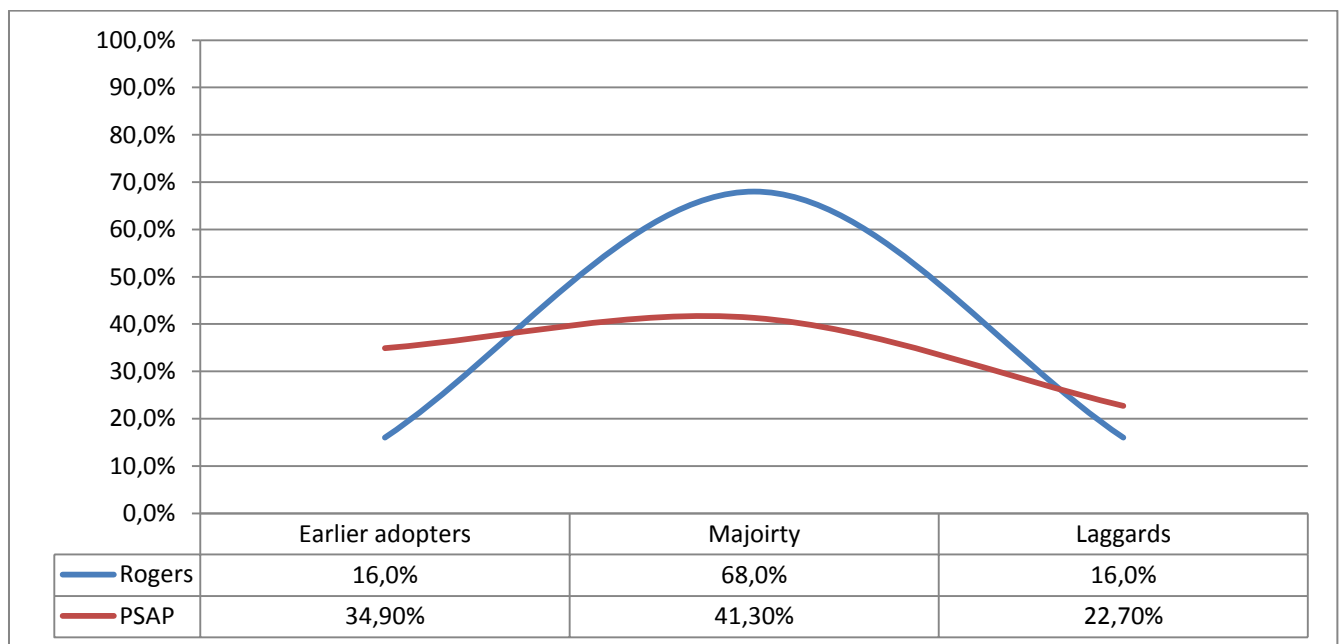
Figure 2: Overview of the initial profiles in the Jukebox case.

### **Step 3** Concretization phase: Jukebox case

These selected profiles received a survey. The first part of the survey examined some general statements. The second part of the questionnaire contained questions probing for their interest in the proposed innovation. In order to assess customer demand, the Product Specific Adoption Potential (PSAP) method was applied to obtain a reliable forecast of market potential. Building further on Rogers' (2003) 'Diffusion of Innovation' theory, this method has been successfully used for and validated for a wide variety of technology products and services (De Marez et al., 2011). According to this theory, the diffusion of an innovation in society follows a bell-shaped pattern amongst five adopter segments: innovators, early adopters, early majority, late majority and laggards. However, traditional intention-based surveys ('Would you be interested in ...?') typically overestimate market potential (Bennett and Kottasz, 2001). In contrast, the PSAP method calibrates overestimations of traditional intention surveys to a more reliable level of personal 'optimal' and 'suboptimal' product offerings (including pricing and features) (De Marez and Verleye, 2004). A drawback of the PSAP approach in this situation is that one time usage also counts as adoption whereas

recurring customers are very important. Qualitative methods allowed to elaborate on this and overcome this limitation.

In the Jukebox case, of the 1200 selected participants 201 completed the survey. Based on the PSAP curve it was possible to confirm that people that love music and go out more often (the profiles selected based on the panel data) are indeed more interested in this innovation than the other clusters. Note that the first three and the third and fourth category are combined because of confidentially reasons. Figure 3 indicates that there are a lot of people interested in using this application. However there still remains a significant group of laggards and people that will ‘wait and see’.



**Figure 3:** Market potential of the Jukebox application

#### **Step 4:** Implementation phase: Streemr case

The next step was to launch the application itself so that the users could use the proposed concept and provide feedback.

The Streemr case indicates that a field test can be very valuable. Next to user insights, this also gave input for the technical configuration of the application. Log files of this usage were

available to the researchers. Based on data logs it was possible to monitor the usage over time. The rather low amount of user don't guarantee statistical sound conclusions but the earlier adopters tend to be heavier users (measured based on the amount of actions on the platform) (see Table 2). However there were still some laggards that turned out to be heavy users. Since different features were added during the field test, it was possible to get an overview of the most important aspects of the user experience. During the field test the users were able to provide feedback so that a constant feedback loop was in place.

Adoptercategory				
Usage		Earlier adopters	Majority	Laggards
	Light users	0	9	3
	Medium users	4	9	1
	Heavy users	2	4	2

Table 2: Analysis based on the log files

#### **Step 5:** feedback phase: Streemr case

The last step was to organize a co-creation session with a diversified group of test users . Based on this it was possible to refine the innovations. In essence this was a feedback session where the users could comment on the whole user experience.

The goal of this session was to gather feedback on the application and how to improve it. The users were asked to provide feedback on every aspect of the user experience. Next to general remarks, it was also possible to provide more specific information like the preferred user context. Despite that the Streemr application was still in a beta phase, the expectations of the users were quite high since they used record TV shows on their digital TV as a reference framework (see Figure 4). Using the application can affect how people perceive the

innovation, therefore it is interesting to compare the responses of the participants over time and find out why they changed their minds. This can be used to improve the concept.

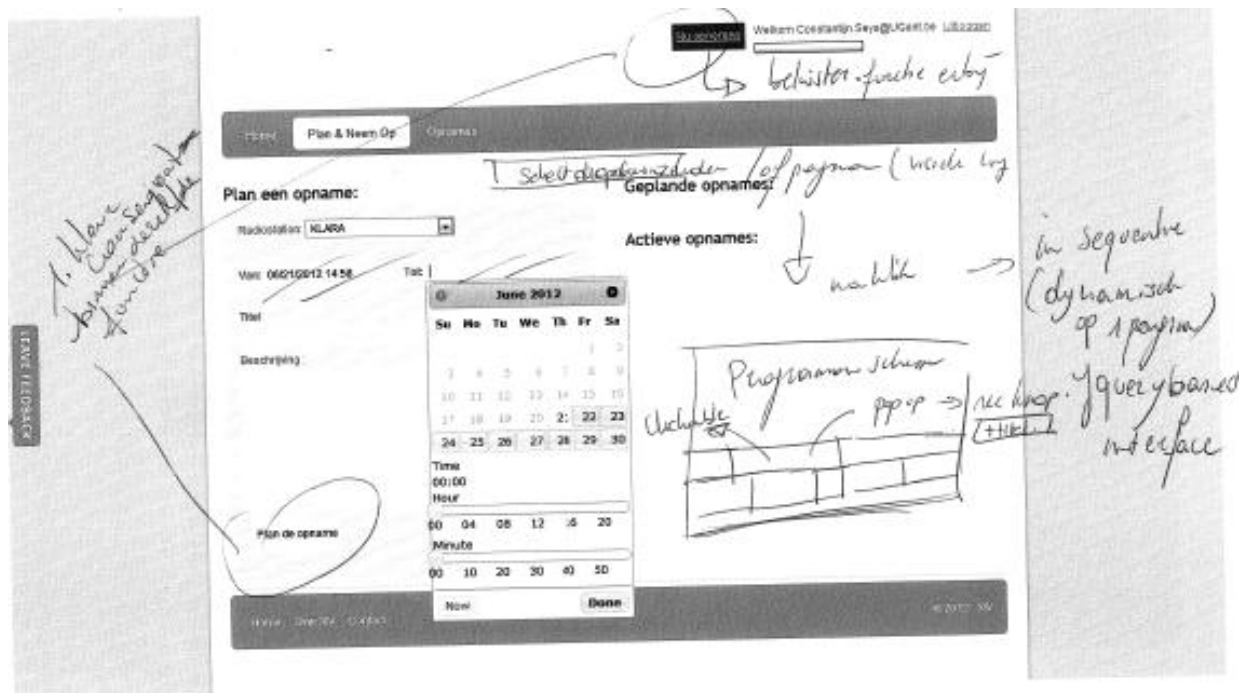


Figure 4: Feedback from a user during the co-creation session of Stroomr.

## Discussion

Traditional research methods only provide a limited amount of information. The Living Lab approach makes information accessible on different levels:

- Matched stakeholder opinions

By involving all relevant stakeholders of the value chain of the innovation. It is possible to gather and confront a wide variety of opinions in order to create an innovation which offers mutual benefit to both end-users, producers of content, the facilitator itself and other relevant parties.

- Segmentation and determination of target groups

Because of the big data which is available on the panel members it is very easy to make a segmentation of different target groups. Because all data is linked, Living Lab research allows

to link further research results back to these profiles to gain a deeper understanding of the differences between them.

- Market potential

Users were able to indicate if they were interested and how long it would take before they would use the application.

- Usability

The initial application allowed the users to experiment with the application and provide feedback on the user experience. Certain aspects were unclear at first and the users were able to indicate these issues.

- Features

It was necessary to determine which features would create value for the users. The initial prototypes had a limited set of features and users asked to elaborate certain aspects.

- User context

The users ended up using the applications in other ways and at other moments than what initially was expected.

- Actual usage

There is a sometimes a difference between what users do and what they say they do. Based on the loggings it was possible to compare the responses in the survey and the loggings. Because Living Lab research often consists of long to medium term research is it also possible to see changes in use over time.

- Business modeling

Based on the feedback of the users, it was possible to determine the optimal price. Since it was possible to create different profiles, the market could be segmented and different offers could be proposed.

- SWOT analysis

These analyses allowed to find the strength and weaknesses of the applications. This provided valuable input for the business plan.

It is clear that this multi-method approach can add a lot of value to the new product development process from the ideation to the launch phase. This was illustrated based on the different discussed cases.

## Conclusion

User-centered design is becoming more important, however traditional methods all have their limitations. A Living Lab approach allows the researchers to combine different methods and adjust their research to the situation. This could help out industries that traditionally struggle to innovate since the user research can happen more efficiently.

It is clear that Living Labs have certain advantage over other approaches. The different datasets can be combined, leading to a broad overview of the responses. The Living Lab approach is very flexible so that the research can be adjusted for the specific innovation. In the previous sections three case studies about music related innovations were discussed. Følstad (2005) also used the Living Lab approach to examine the potential of an online music community site. This author also found that this approach could be very valuable. The combination of data sources provides an in-depth insight about the wants and needs of (potential) users. However this method also has several drawbacks. It is important that the panel is large enough since a lot of participants drop-out. Another drawback is that it takes a lot of time to set up this type of research. Further research has to clarify what the optimal approach is for Living Labs and to what type of innovations it can be applied.

Based on this, it can be concluded that the Living Lab approach can offer valuable input for the music industry. This could require a shift for the music industry from deal making to creating products. There are already certain services available that indicate that there is a huge potential for bringing new music services to the market. As illustrated in this paper, user feedback can prove to be valuable during the development of new services and products. This Living Lab approach can also be used in other industries and sectors.



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